

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 August 2005 (18.08.2005)

PCT

(10) International Publication Number
WO 2005/075468 A2

(51) International Patent Classification⁷: **C07D 417/00**

(74) Agents: **CLYDE-WATSON, Zoe** et al.; D. Young & Co.,
120 Holborn, London EC1N 2DY (GB).

(21) International Application Number:
PCT/GB2005/000405

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 7 February 2005 (07.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0402653.0 6 February 2004 (06.02.2004) GB

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **CYCLACEL LIMITED** [GB/GB]; 6-8 Underwood Street, London N1 7JQ (GB).

(72) Inventors; and

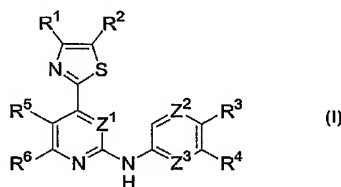
(75) Inventors/Applicants (*for US only*): **DUNCAN, Kenneth** [GB/GB]; 73 Woolcarders Court, Hayford Mill, Cambusbarron, Stirlingshire FK7 9RA (GB). **GIBSON, Darren** [GB/GB]; 97 Lawers Drive, Broughty Ferry, Dundee DD5 3UN (GB). **WANG, Shudong** [AU/GB]; Burnside Mill, Forfar, Angus DD8 2RZ (GB). **ZHELEVA, Daniella** [GB/GB]; 28 West Acres Drive, Newport on Tay, Fife DD6 8NR (GB). **FISCHER, Peter** [GB/GB]; Denley Lodge, 1 Arbirlot Road, Arbroath, Angus DD11 2EN (GB).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS



(57) **Abstract:** The present invention relates to compounds of formula (I), or a pharmaceutically acceptable salts thereof, wherein: Z¹:1 is N or CH; Z² and Z³ are each independently N or CR⁷; R¹, R², R³, R⁴, R⁵, R⁶, and R⁷ are each independently H, R⁸, or R⁹; each R⁸ is independently a hydrocarbyl group; and each R⁹ is independently halo, NO₂, alkoxy, CN, CF₃, SO₃H, SO₂NR¹⁰R¹¹, SO₂R¹², NR¹³R¹⁴ (CH₂)_aCOOR¹⁵, (CH₂)_bCONR¹⁶R¹⁷, (CH₂)_cCOR¹⁸ or (CH₂)_dOH; a, b, c and d are each independently 0, 1, 2, 3 or 4; R¹⁰⁻¹⁸ are each independently H or alkyl; provided that when R¹ and R² are both H, Z¹ is CH; or Z² is N; or Z¹ is CH and Z² is N; and wherein the compound is other than 4-(4,5-dimethylthiazol-2-yl)-N-(3,4,5-trimethoxyphenyl)-2-pyrimidineamine or 4-(5-(2-hydroxyethyl)-4-methylthiazol-2-yl)-N-(3,4,5-trimethoxyphenyl)-2-pyrimidineamine. Further aspects relate to the use of compounds of formula (I) in the preparation of a medicament for treating one or more disorders selected from a proliferative disorder, a viral disorder, a CNS disorder, diabetes, stroke or alopecia.

WO 2005/075468 A2